

THE RUSSIAN BATH, INVENTED BY DR. KOTU, AND USED AT HIS INSTITUTION, 10A, OLD CAVENDISH STREET, CAVENDISH SQUARE.  
For Description, see page 35.

# THE RUSSIAN BATH;

PUBLISHED

WITH A VIEW TO RECOMMEND ITS INTRODUCTION INTO ENGLAND

FOR

Hygienic as well as Curative Purposes.

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SECOND EDITION.

WITH SOME SUGGESTIONS REGARDING PUBLIC HEALTH,

ADDRESSED BY PERMISSION TO

THE RIGHT HON. W. F. COWPER, M.P.,

PRESIDENT OF THE BOARD OF HEALTH.

BY

MATHIAS ROTH, M.D.,

PHYSICIAN TO THE INSTITUTION FOR THE TREATMENT OF DISEASES BY MEDICAL  
GYMNASTICS AND THE RUSSIAN BATH, IN OLD CAVENDISH STREET.

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## TO THE RIGHT HON. W. F. COWPER, M.P.,

PRESIDENT OF THE BOARD OF HEALTH.

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SIR,—You have, in the course of last year, repeatedly expressed some interest in the general introduction of the means which I am advocating for the prevention of many diseases, and for the cure of them at their commencement. You have convinced yourself of the efficacy of these means in the case of several of your friends, and when you honoured my Institution with your visits, you experienced and witnessed the practical working of some of these means; it is therefore with much gratification that I avail myself of your kind permission to address to you the Second Edition of this pamphlet,\* with some Suggestions regarding Public Health, hoping you will find them worth examination.

Although the Board of Health, being comparatively but a new creation, is not yet the centre of all that relates to health in the State in general—be it in the parish, the army, or navy—and although the Board does not yet occupy that high and important place which the public health requires, yet it has still the privilege of examining, advising, and reporting on all matters regarding health.

*To make the population as healthy as possible, to prevent disease as far as it can be done, and thus to increase the average of life, is the great aim of the Board of Health. Great efforts are undoubtedly made to study and to remove the causes of epidemic diseases which attack violently many persons at once, and kill suddenly; but very little is done with regard to other most destructive*

\* The first edition of which was published three years ago.

diseases, which are not so much thought of, because many of their victims frequently linger from early childhood or youth, and continue their ailing existence for years.\*

I am told that the great Duke, as Commander-in-Chief, based the efficiency of his army on the individual capabilities of the single soldier. In the same way, the President of the Board of Health, as the Commander-in-Chief of the health of the community, must base it on the health of each individual; and therefore it is important not merely to remove those injurious influences which affect the community as a whole, but also those which affect it in its parts, viz., the single individuals.

Such a removal, although indispensable for attaining the great aim of the Board of Health, cannot even be thought of, as long as the individual ignorance with regard to all matters affecting health is so general in all classes, and as long as at least an elementary knowledge of the means for preserving health, and developing our bodily faculties in connection with those of our mind, is not only made popular, but also practically introduced as a complementary part of elementary education.

Although the sphere of action of the Board of Health has been hitherto restricted to give instruction and advice to the local boards, they have already contributed to improvements, which are visible in the last Quarterly Report of the astonished Registrar-General. But how more beneficial and lasting will be the changes which can be produced in public and individual health, if the Board over which you preside could convince the Council on Education how important it is to make elementary knowledge of health, and bodily development, a branch of instruction in all the training and other schools assisted by the public funds; how different would be public health, if the Poor Law Commissioners and the Clergy could be convinced of this truth, and would introduce such practical instruction in all the parish, workhouse, and private schools. I am sorry to say that my appeal, in a letter on this subject, to the President of the Council on Education,† was in vain;

\* The Society of Arts has lately begun an inquiry into the injurious influences connected with certain trades and manufactures, and into the best methods of counteracting them.

† A Letter to the Right Hon. Earl Granville, Lord President of the Council

but if the Board of Health would urge the necessity of sanitary education, their appeal certainly will have a better result. I have shown in that letter the advantages resulting from scientific gymnastic training, and will add here only the following extracts from two American authors:—

Horace Mann has the following passage in the description of a gymnastic hall, in Boston:—"It is a pleasure to look upon this scene when the room is well filled, the apparatus in full use, and the gymnasts passing round from one piece of the apparatus to another, to give the requisite variety to their exercises, and to allow each different part of the body to take its turn. It is not the vigour, the agility, or the quickness, it is not the length of the leap, nor the height of the vaulting, which alone delights us in contemplating this scene. To a reflecting mind there is a deeper pleasure than could be derived from beholding any mere exhibition of strength, though it should equal Samson's, or of fleetness, though it should emulate that of Mercury. We know that every leap and spring aids in renewing the substance of the body, and therefore in giving greater hilarity to the spirits and superior vigour to the intellect. Every motion helps to construct a fortification against disease, and to render the body more impregnable against its attacks. It requires, indeed, no very strong imagination to see the horrid forms of the diseases themselves, as they are exercised and driven from the bodies which were once their victims, and are compelled to seek some new tenement. Those prodigious leaps over the vaulting horse, how they kick hereditary gout out of the toes! Those swift somersets, with their quick and deep breathings, are ejecting bronchitis, asthma, and phthisis from the throat and lungs. On yonder pendent rope consumption is hung up like a malefactor, as it is; legions of blue devils are impaled on those parallel bars. Dyspepsia lost hold of its victim when he mounted the flying horse, and has never since been able to regain his accursed throne, and live by gnawing the vitals. There goes a flock of nervous distempers, headache, and tie douloureux, and St. Anthony's fire; there they fly out of the window, seeking some stall-fed alderman or fat millionaire. Rheumatism, and



cramps, and spasms sit coiled up and chattering in the corners of the room, like Satanic imps as they are, the strong muscles of the athlete having shaken them off, as the lion shakes the dew-drops from his mane. Jaundice flees away, to yellow the cheeks and *blear* the eyes of my fair young lady reeling on ottomans in her parlour. The balancing pole shakes lumbago out of the back, kinks out of the femoral muscles, and stitches out of the side. Pleurisy, and apoplexy, and fever, and paralysis, and death hover round; they look into the windows of this hall, but finding brain, and lungs, and heart all defiant of their power, they go away in quest of some lazy cit, some guzzling drone, or some bloated epicure at his late supper, to fasten their fatal fangs upon them.

"In the meantime the rose blooms again on the pale cheek of the gymnast; his shrivelled skin is filled out, and his iron elastic muscles and bones rejoice anew in the vigour and buoyancy of youth. A place like this ought to be named a *Palace of Health*."

Cleveland, in his excellent Essay on the "Classical Education of Boys," says—"First of all, I would recommend those exercises which strengthen the frame systematically, as gymnastics of every kind. I am aware that these are in use among us, but they are rarely insisted on as a duty; children are left to their inclinations; and this is a country where the excessive heat in summer and cold in winter induce to want of energy and inactivity. I wish that an hour a day might be set apart, and kept rigidly, for these exercises. The results of such an education are truly astonishing. \* \* \* \* It is melancholy indeed in our institutions for learning, especially our colleges, to see so many puny-looking young men; hollow chests and shoulders and bending body are characteristics of our students; and premature old age or consumption carries off but too many of our most gifted men."

Sir James Kay Shuttleworth, in his Reports to the Poor Law Commissioners on the Training of Pauper Children and, on the Training School at Battersea, published fifteen years ago, has repeatedly called attention to the importance of gymnastic training, showing that, under the same management and the same circumstances, the want of regular bodily exercises is accompanied by a *lower* state of health. I had lately an opportunity of observing in the Marylebone Workhouse that the average appearance, strength, and



health of the girls is worse than that of the boys, who are regularly drilled; whilst the girls, amongst whom were many affected with scrofula and eye complaints, and generally wanting the energy required to keep themselves erect, are not instructed in any gymnastic exercises, although they are permitted to be in the playground as much as the boys. In a deaf and dumb asylum in Scotland, I have seen nearly every fifth boy scrofulous; and in an asylum for the blind, in the same country, the majority of the girls have a sickly appearance, and many of them are affected with spinal curvatures. Although both these Institutions are well managed in other respects, there is nothing done for their bodily training, and the blind girls have not even a playground.

How is it possible to find health in numerous families, where the mothers have not the slightest notions of all that concerns air, food, drink, dress, exercise, cleanliness, etc., and where infants, with the very best constitutions, exposed for years to noxious influences, are by ignorance artificially brought into a state of health which, under the form of scrofula, rickets, consumption, and other affections, undermines their future life, or cripples them for ever.

The number of public baths hitherto established would not be so small if people were less ignorant about themselves, and every parish would be obliged to erect them, and would be amply repaid, because, in adding to the means of preserving health, the poor-rates would decrease in proportion to the number of healthy and able-bodied parishioners.

My reasons for recommending the introduction of the so-called *Russian Bath*, in preference to all others, into educational institutions, hospitals, asylums for the lunatic, the blind, the deaf and dumb, and idiot, in prisons, public baths, model lodging-houses, manufactories, war and other steamers, emigrant vessels, men-of-war and transports, barracks, and wherever many persons are to live together, are that this bath combines all the advantages of the cold, warm, and vapour bath, and of various manipulations known as shampooing, *massa-tossa-rossa*, or *karabaz*, among Eastern nations, which manipulations are also frequently used in the so-called *movement cure*, or treatment of diseases by medical gymnastics; and my further reasons are, that this bath is used not only to preserve health, but, if judiciously applied, also as a most important means of cutting short many diseases at their commencement, and of

euring many others when developed, without excluding other remedies which might be desirable.

Many a workman would thus have easily the means of being relieved from his indisposition, and of remaining the support of his family, when, in the absence of such a facility, he is apt to neglect his indisposition, and a long and serious illness involves him in irretrievable difficulties.

Nor is it in a small number of cases only that these simple means would be effective; they would tell powerfully upon a large amount of the suffering to which the working classes are most subject—in common colds, at the beginning of many rheumatic and gouty affections, and in others which follow suppression of the activity of the skin, and to which the working classes are exposed, by being compelled to work and live under so many unfavourable influences. Such baths could be very readily added to the few present public baths, because the supply of vapour and of hot and cold water is already so considerable, that, except for extra space, there is no reason for any great additional expense. Similar baths are national in Poland, Russia, Turkey, Egypt, etc., etc.; and indeed from the time of the Greeks and Romans they have been known as preservatives of health, by diminishing the sensibility to external influences, by increasing the activity of the great emunctory, the skin, and by their power of preventing many diseases. For further illustration of the power of this bath to ward off diseases, especially those to which workmen, exposed to all the vicissitudes of weather and changes of temperature, are most liable, I refer to the contents of this pamphlet.

Many a soldier and sailor, exposed to all the hardships of the service during the present war, would have been able to preserve his strength and health if his medical man could have made use in time of such a bath, which could be made as transportable as a camp forge; but it seems that hitherto more attention has been paid and precaution shown in mending a wheel or a cart, even when but slightly out of order, than to the most precious of goods—to the health of the human body. In large public establishments, the expense of such baths would be a trifle more than in the present public baths; while on board of all the steamers, and manufactories worked by steam-engines, at little expense, much health could be got; and in establishments without steam-engines, the kitchen fire would be sufficient to supply the bath.

What I have mentioned in this letter may be enough to call your attention to the object I have in view, and should it please you to examine more minutely my suggestions with regard to the introduction of popular elementary sanitary knowledge, of scientific bodily training, and of public gymnastic and bath establishments, I should be most happy to furnish further details on these most important subjects.

I have the honour to be,

Sir,

Your most obedient servant,

MATHIAS ROTH, M.D.

16A, OLD CAVENDISH STREET,  
CAVENDISH SQUARE, LONDON,  
*November, 1855.*



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# THE RUSSIAN BATH.

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## INTRODUCTION.

HAVING added the Russian bath to my Institution for the Cure of Diseases, and of Spinal and other Deformities, by Movements, I am induced to publish this compilation, in order to give some slight information, partly to such medical men as are not acquainted with this bath, partly to those patients who make use of it for the first time. Notwithstanding that the Russian bath by itself is in many diseases curative, and in others an important accessory, it must not be regarded as a panacea in all complaints; on the contrary, there are many cases in which it must be used only with the greatest caution, while in others it is absolutely injurious. I shall try to give in the following pages, besides a short historical sketch, the most necessary rules to be observed by the patient during this treatment, the importance of which will be understood when we consider that the old physicians early introduced into their practice this remedy of Nature's own invention, and employed it with great success; when we recollect that Rome for five hundred years had no physician but the bath, and that to this day many nations cure almost all their maladies by baths alone. Nature seems to have pointed out to mankind the use of vapour-baths, through the caverns filled with vapour formed in volcanic regions, and representing so many natural vapour-baths, which, like mineral



baths, have been used probably from the most remote ages, and in a manner similar to that of many wild tribes in America, who dig holes in the earth, which they fill with vapour produced by pouring cold water on red-hot stones.

What is called the Russian bath combines with the general effect of bathing an eminent curative power in diseases which have obstinately resisted many other internal and external remedies, and is a substitute for the so-called water cure in many diseases; therefore, patients in town, whose circumstances do not permit an absence from their home and occupations, have an opportunity of availing themselves of these natural curative means. Time and experience have taught that the Russian bath contributes essentially to the preservation of the health and beauty of the human body, as well as to the prevention and cure of many chronic diseases. These effects are produced by the increase of the functions of the skin, of the circulation of the blood, and of the humours in the lymphatic vessels. Sanchez, Poehhammer, Schmidt, Vering, Rapou, Barries, and others, have endeavoured to show the efficacy of the Russian bath, and their labours have contributed to its greater use on the Continent, and to our knowledge of it. To the valuable information obtained from the writings of these authors, I have added my own observations with regard to this treatment, to which I owe, in a great measure, the recovery of my health after a protracted rheumatic disease, in which my vital powers had been almost totally exhausted by the most debilitating processes.

In England its use is less known to the public as well as to the profession, although a few establishments exist in which operations are performed similar to those of the Russian bath.

Patients must not make use of this bath without medical advice, because it is necessary to know the temperature, the duration, the different general and local applica-

tions of the warmth and cold, the various manipulations, and the regimen to be observed before, in, and after the bath, if we desire to obtain beneficial results.

#### HISTORICAL SKETCH.—BATHS AMONG THE ANCIENTS.

Bathing among the ancients made a part of regimen, and was used as familiarly as eating or sleep ; and cold bathing was in high esteem among their physicians for the cure of diseases, as appears from Strabo, Pliny, Hippocrates, and Oribasius, whence occur frequent exhortations to washing in the sea, and plunging into cold water. The first instance of cold bathing as a mode of cure, is Melampus bathing the daughter of the king of Argos ; and the first instance of warm bathing is the use of it by Medea, who was said to boil people alive, because Pelias, king of Thessaly, died in a warm bath under her hands. Among the ancients the baths were public buildings, *under the immediate cognizance of the government*. The introduction of them as public institutions was owing to cleanliness and convenience, but in process of time all the graces of architecture were lavished upon them ; and at length luxury and voluptuousness so perverted them from their primitive purposes, that they became offensive and shocking to the moralist of antiquity. Alexander was astonished at the magnificence of the baths in Persia. At Rome, under the emperors, there were 870 of these edifices, which, with respect to magnificence and taste, might pass for masterpieces of art ; and in after ages they were demolished by the Goths, or converted by bishops into churches. That the Romans, who enjoyed dominion in England near four hundred years, had their baths in this country is evident from the frequent ruins of them which are found, and some instances occur where the builders had undoubtedly the *thermæ* of their parent country in view. At Hovingham, in the north riding of Yorkshire,

a Roman bath was discovered in 1745, which had its *sudaria* and *vaporarium* (Camden, iii. 85, ed. 1789); and ten years after, in taking down the Abbey House at Bath, to build a new set of baths, called the Duke of Kingston's, the workmen found remains of very noble Roman baths and sudatories, whose springs and drains were made use of for the present baths.\*

The Turks and other oriental nations, succeeding by conquest to the luxuries of the enervated Greeks and Romans of the Eastern Empire, seem, as was most natural, to have retained the institution of the baths nearly in their original state. A bather in Turkey first enters a large apartment at a low temperature, and furnished with couches in recesses, where he undresses and leaves his clothes, attended by a person, who immediately furnishes him with another covering, formed of long towels, or *περιζωμα*, answering to the *subligar*, and a rolled towel on the head, corresponding with the *araculus* of the Romans. This room seems, by its use, to correspond with the *apodyterium* of the ancients, which appears to have been the apartment where the frequenters of the bath undressed. From the outer room of the Turkish bath the stranger is conducted through two or more rooms, each increasing in warmth, to a hall, generally vaulted, and heated to a degree which would be disagreeable to a person in ordinary habiliments, but to which he soon becomes reconciled, and which shortly produces a most profuse perspiration. This can be no other than the *laconicum* of the ancients, which, like it, was vaulted and filled with warm air from stoves and hot water, and was called also *calidarium*, *vaporarium*, and *sudatorium*. This apartment was anciently, as at present, a chamber under the pavement of which the heat of a furnace was introduced, whence it derived its appellation of *hypocaustum*. These are the principal divisions of a Turkish *hamam*,

\* Pompeiana, by Sir William Gell.

derived and continued from the Greeks and the Romans. The story of the taking of Alexandria by the Saracens, and the destruction of the library by the application of the volumes to the heating of the baths, is at least a proof that these institutions did not fall into disuse during the general change of manners which then took place. Juvenal says that youths under the age of fourteen paid nothing. The smallness of the sum, however, was a great encouragement to the bathers, who, according to Pliny, sometimes bathed seven times in one day. It was the custom to induce perspiration first, and after the operation of the *strigil*, to resort to the warm-water bath. The *strigil* is well known to have been a sort of concave and sickle-shaped scraper, made of bone, iron, copper, or silver, for cleansing the skin from the copious perspiration caused by the *laconicum*. It was by no means a very agreeable operation, and Suetonius says Augustus was a sufferer by its having been too roughly used. Its place is now supplied in a Turkish bath by a sort of bag or glove of camel's hair, which, without pain, throws off the perspiration in large flakes, and leaves the skin in a most wonderfully luxurious state of softness and polish. After the warm water, a cool stream was probably poured on the head from the *labrum*, and this was the preparation for encountering the lower temperature of the *tepidarium*, when, after the use of unguents, it was thought safe to enter the *frigidarium*, and thence to pass into the open air. The *thermæ* must have been of great advantage to the practice of medicine. Alexander the Great is said to have slept in the bath during a fever; and certainly, where perspiration was the object, such a plan could scarcely fail. They practised cupping and bleeding with leeches also in the *laconicum*. The physicians of antiquity have written much on the subject of *thermæ* and their effects, without always rendering the subject very intelligible. Galen (book x.) says a bather should first go into the warm water, or λουτρον, thence into the cold;

after this he should enter the *tepidarium* or *apodyterium*, where the scraping off the perspiration should be performed. But Celsus (book i. c. iv.) seems to have given exact information, and tells us that people perspired a little in the *tepidarium*, then entered the *calidarium* or *laconicum*, and retired in order through the hot, the tepid, and the cold apartments. Galen says that he who neglects the cold chamber, or cold water, is in danger of catching cold on passing into the open air. In places not affording the convenience for immersion in the *solium frigidum*, aspersions of cold water, like a shower bath, are recommended; and this is, in fact, resorted to in the Turkish baths, where the *natatorium* does not commonly exist. It is observable that those who bathe, or rather perspire in the Turkish *hamam*, very rarely, if ever, take cold on returning to the open air. A disease depending on impeded perspiration could indeed scarcely exist, where everything like perspiration had been previously so carefully removed.

#### PRESENT BATH IN EGYPT.

The following description of the public bath and the method of using it is extracted from the account given of the baths at Cairo by Savary (Travels, vol. i. p. 146). The first apartment, or undressing chamber, is a lofty and spacious hall, which rises in the form of a rotunda, and is open at the top for admitting a free circulation of the air. There is a spacious *estrade* or raised floor, covered with a carpet, and divided into compartments, on which the person who bathes lays his clothes. In the middle of the building a *jet d'eau* spouts out from a basin, and agreeably entertains the eye. When you are undressed, you tie a napkin round your loins, put on a pair of sandals, and then enter a narrow passage, where you begin to feel the heat; the door being shut, at the distance of twenty paces you open a second door, and

proceed along a passage which forms a right angle with the former; here the heat increases; those who are afraid of exposing themselves to a stronger degree of it, stop in a marble hall on the way to the bath, properly so called. The bath itself is a spacious and vaulted apartment, paved and lined with marble, and round it there are four closets. The vapour rising incessantly from a fountain and cistern of hot water, mixes itself with the burning perfumes, when perfumes are desired by the persons who bathe. The bather, extended on a cloth that is spread out, and with the head supported by a small cushion, stretches himself freely in every posture, whilst he is enveloped in a cloud of odoriferous vapours which penetrate all his pores. After reposing there for some time, till a gentle moisture is perceived over the whole body, a servant presses him gently, turns him over, and when the limbs have become supple and flexible, he makes all the joints crack without difficulty. He *masses*, *i. e.* delicately touches, and seems to knead the flesh, without causing the smallest pain. When this operation is finished, he puts on a glove covered with a piece of coarse stuff, and rubs for a long time; and during the operation he detaches from the body, reeking with perspiration, a scurf or sort of small scale, and removes even the imperceptible filth that stops the pores. The skin becomes soft and smooth like satin. He then conducts you into a closet, pours a lather of perfumed soap upon your head, and then withdraws. The closet is furnished with a cistern and two cocks, one for cold and the other for hot water. After having washed in this apartment, the servant brings a depilatory pomatum, composed of a mineral called *rusma*, which is of a deep brown colour, and which the Egyptians burn lightly, knead with water, and mix with half its quantity of slaked lime. This greyish paste applied to the hair makes it fall off in a little time, and it is generally used by both men and women in Egypt. After being well washed and purified, the bather



is wrapped in hot linen, and conducted through the windings that lead to the outer apartment, and by this gradual transition from heat to cold, or by stopping for some time in the hall next the stove, no inconvenience arises from the use of the bath. On arriving at the *estrade*, he has a bed prepared for him, and as soon as he has lain down, a child presses every part of the body with its delicate fingers, in order to dry him thoroughly; here the linen is changed a second time, and the child gently grates the callosities of the feet with pumice-stone; he then brings him a pipe and Mocha coffee. By these baths, says Savary, the use of which the ancients strongly recommended, and which are still the delight of the Egyptians, are prevented or dispelled rheumatism, catarrhs, and such cutaneous disorders as are produced by want of perspiration. Thus the blood is made to circulate with freedom, the whole body acquires a suppleness and lightness, and the spirits gain a vivacity, which are not experienced in an equal degree by those who do not pay so much attention to external cleanliness. The women are particularly fond of these baths, and frequent them at least once a-week; after undergoing the usual preparation, they wash their bodies, and more especially their heads, with rose-water. Here the attendant women form their long black hair into tresses, to which they apply costly essences, instead of powder and pomatum. Here they blacken the edges of their eyelids and lengthen their eyebrows with "cohel," a preparation of tin, burnt with gall-nuts. Here, also, they stain their fingers and toe-nails with *henna*, which gives them a golden colour; the linen and clothing which they use are passed through the steam of the wood of aloes. The days appropriated to the use of the bath are festivals for the Egyptian women; on these occasions they pay great attention to the ornaments of their dress, as well as to the cleanliness of their persons.



## THE BATH IN RUSSIA.

Mr. Tooke (*View of the Russian Empire*, vol ii. p. 27) informs us that the lower classes of Russians, in general, use but few medicines, supplying their place in all cases by the sweating bath, a practice universal among them, and which has a decided influence on the whole physical state of the people. The use of the bath, that relic of the manners of the ancient world, as this ingenious writer denominates it, is now almost entirely confined to the oriental nations, where it ministers both to health and to luxury, and is perpetuated by religion; in Europe it has been gradually declining for several centuries, though it was here also in some sort interwoven with religion, the holy water of the Roman Catholic Church being a slight remnant of it.

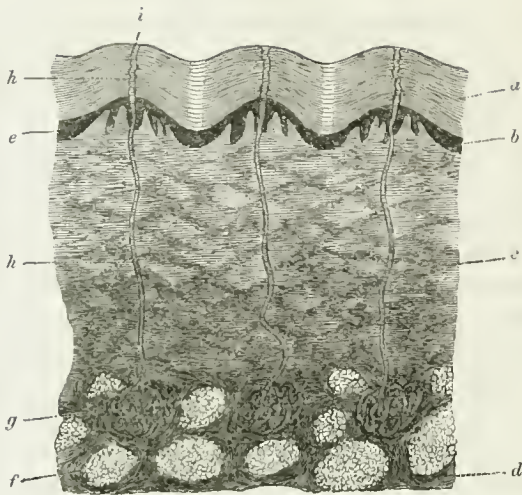
In Russia particularly, the bath forms so essential a part of the system of living, that it is used by people of every age and in all circumstances; for infants and lying-in-women; in almost all sicknesses; before and after a journey; after hard work, etc. The bath is a necessary of life so indispensable to the common people, that they frequent it as often as possible, well or ill, and without any particular occasion, once a-week at least. Persons of middle station in good circumstances, and the great, usually construct vapour-baths, after the Russian fashion, in their own houses. Baths have been common in Russia from time immemorial; they were described by Nestor, so long ago as the eleventh century, precisely in their present form. In Russia, the public baths, called public because they are under the care of the police, and let out to common people on account of the Imperial Treasury, usually consist of mean wooden houses, situated, when it is possible, by the side of a running stream; in the bath-room is a large vaulted oven, which, when heated, makes the paving-stones lying upon it red hot, and adjoining to the oven is a boiler fixed in masonry, for the purpose of holding heated water.

Round about the walls are three or four rows of benches, one above another; the room has little light, but here and there are small apertures for letting the vapour escape; the cold water that is wanted is let in by small channels. Some baths have an antechamber for dressing and undressing; but, in most of them, this is done in the open court-yard, which on that account has a boarded fence, and is provided with benches of planks. In those parts of the country where wood is scarce, they sometimes consist of wretched caverns, commonly dug in the earth, close to the bank of some river. In the houses of wealthy individuals, and in the palaces of the great, they are constructed in the same manner as described above, but with superior elegance and convenience. The heat in the bath-room is usually from 105 to 122 degrees, and this is much increased by throwing water every five minutes on the red-hot stones within the oven; thus the heat often rises, especially on the uppermost bench, to 130 degrees. The persons that bathe lie quite naked, on one of the benches, where they perspire more or less, in proportion to the heat of the humid atmosphere in which they are enveloped. For promoting perspiration, and more completely opening the pores, they are first rubbed, and then very gently flagellated with leafy branches of birch. After remaining for some time in this state, they come down from the sweating bench, and wash their bodies with cold or warm water, and at last plunge overhead into a large cistern of water; many persons throw themselves immediately from the bath-room into the adjoining river, or roll themselves in the snow, at a temperature of 12 degrees or less.

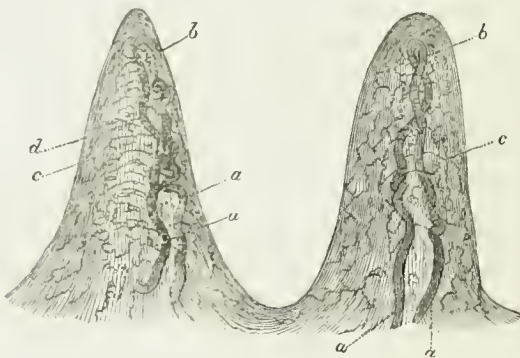
All exanthematic diseases are abated by these baths, and consequently the small-pox; if this dreadful disorder be actually less fatal in Russia than in other countries, it need not be attributed to any other cause than to the vapour-bath.

## EFFECT OF THE RUSSIAN BATH.

The Russian bath, being composed of so many different single elements, acts on the organism according to the difference of the agents employed in each individual case; and, in order to understand perfectly the effects of this bath, it would be necessary to describe those of the different degrees of heat and cold, and to show the variety of the results produced by the different methods of applying them. Though the action of hot air, hot water, and hot vapour is not the same, the effects of cold sponging, cold shower-bath, cold douche, and immersion in cold water must not be confounded. The general and local application of heat and cold, as well as the different manipulations, should be mentioned; but it does not answer the purpose of this pamphlet to enter into these details, by which a large volume could be filled. We content ourselves with stating that the direct effect of the bath manifests itself in the skin and the mucous membranes of the respiratory organs; that it accelerates the circulation of the blood; reddens and softens the skin; produces a profuse perspiration during and after the bath; causes a slight and brief artificial fever, with increased activity of the skin and mucous membranes of the respiratory organs, by which the increased irritability of the arteries and the too great sensibility of the nerves are lessened. The effect of the bath extends from the skin equally to all the other organs, and does not depend alone upon the larger or smaller quantity of perspiration. To those little acquainted with the anatomical structure of the skin, it will not be uninteresting to learn, from the following woodcuts copied from Kolliker's excellent "Microscopical Anatomy," a few details of the different parts of which the skin is composed, and by which the importance of the functions of this organ, with regard to the preservation and restoration of our health, will be easily understood.



I. Vertical section of the skin of the top of the thumb, transversely through three of its ridges, magnified twenty times : *a* (epidermis), cuticle, scarf-skin ; *b*, mucous coat (stratum) ; *c*, true skin ; *d*, upper part of the fatty layer ; *e*, papillæ ; *f*, fat conglomerations ; *g*, sudatory glands ; *h*, sudatory ducts ; *i*, external apertures of the sudatory ducts.



II. Two papillæ of the palm of the hand magnified

350 times: *a a*, the two primitive fibrils of the nerves at the base of the papillæ; *b*, final loops, which are properly the organs of touch, and so closely placed near each other that there is not a spot upon which we could place the point of a needle without touching some of them.



III. A ball of sudatory glands and its vessels, magnified thirty-five times: *a*, ball of glands; *b*, excretory duct, or sudatory channel; *c*, vascular net surrounding the glands. According to the numerous observations of Krause, the average number of sudatory glands, each assumed to be of the size of one-sixth of a line, approximates to 2,380,000; the smallest quantity per square inch is on the neck, back, and breech, 417; while the largest is on the palm of the hand, viz., 2,736.

By this admirable structure the skin is enabled to carry waste matter out of the system, to protect the body against external influences, and to be an organ of absorption, and the seat of sensation and touch. It is essential that the skin should perform these different functions in a regular way, if health is to be preserved; because, as soon as the activity of any of them is deranged, the most varied diseases originate in the internal organs. This explains why the Russian bath, if rationally used, is so

beneficial in diseases apparently very different from each other. Amongst the elements composing the Russian bath we will briefly mention, with regard to their effects, only the caloric, the vapour, the frictions, the shampooing, and the immersion in cold water.

#### EFFECT OF THE CALORIC.

The effect of the Russian bath in general, with regard to increased activity of the skin, is not only an external one, as far as the skin envelopes the body, but also an internal one ; because the vapour acts on the continuations of the skin to the interior of the body, namely, the mucous membranes of the nose, the frontal sinuses, the larynx, the windpipe, the lungs. As the vapour is instantly absorbed by the respiration into the interior of the body, it becomes either a remedy itself, or a means of directing other remedies immediately to the farthest ramifications of the air-tubes in the *parenchyma* of the lungs, where the purification of the blood takes place (Reil). The immediate effect of the caloric manifests itself, in the first place, in the lungs and the skin, which is also a respiratory organ, and an important auxiliary to the lungs. The respiratory organs are the altar on which the flame of life is uninterruptedly preserved by the oxygen of the atmosphere. From this altar the arterial blood takes it up, conducts it by the vascular system to every point of the organism, and there produces the same vital process. The effect depends partly upon the extent of the surface on which the blood comes in contact with the atmospheric air, partly on the quantity of blood existing within this superficies, and partly upon the rapidity of the blood-circulation. As in this bath, called by Reil a fire-bath rather than a vapour-bath, a man may become as red as a boiled lobster, he may easily contain in his skin a hundred times more blood than he usually has there, and which may circulate in half the usual time, as is evident



by the quickness of the pulse and respiration during the bath. The effect of the atmosphere on the blood is consequently increased at least a hundred times. What takes place in the skin also occurs, though invisibly, in the lungs. The respiration of the skin can be made intelligible by the interesting phenomenon visible in the gills (the respiratory organs) of fishes, as they abound with blood, which they bring in contact with the atmosphere, and colour with a vivid redness. In this way the skin and lungs act in the vapour-bath.

#### EFFECT OF VAPOUR.

If the whole body is exposed to the vapour of 98 to 115 degrees its temperature is slightly increased; the skin is covered with a pleasant dew (the condensed vapour), becomes soft, seems to expand, and, as well as the subjacent cellular texture, swells sensibly; gentle perspiration appears on the whole body; the pulse is a little quickened and more full; the respiration more frequent, without being uneasy; the bather has a little tendency to sleep, and an inexpressible feeling of repose and comfort comes over him. This feeling is prolonged beyond the bath; after we have left it, we feel pleasantly languid, calm, refreshed, in better spirits, and lighter, and all the functions are performed with more ease and regularity; there appears to be more harmony and a more equal balance amongst the different organs: in general, the appetite is increased, and the skin more sensible to the impressions of cold. This last effect will not take place, at least not immediately, after a very hot vapour-bath. The state of repose and general comfort following the use of the vapour-bath are the causes why all those who use it consider it as one of the most pleasant enjoyments of life. If the temperature of the vapour is considerably raised, the skin becomes red and hot, and, as well as the external cellular texture, gets into a state



of turgescence and remarkable swelling; the limbs, and principally the fingers, considerably increase in size; the muscles lose temporarily their energy, and we are incapable of pressing even small bodies with force; the beating of the pulse is strong and frequently accelerated; the vessels of the head swell; the respiration is sometimes difficult; profuse perspiration trickles over the body; and a thirst, more or less intense, manifests itself. These symptoms differ in intensity, and remain for a shorter or longer time after the bath, according to the degree of heat, the duration, and the infinitely varied circumstances which may surround us. Such baths are stimulating and exciting, if perspiration does not continue after the bath, or if means are used to suppress it, as, for instance, ointments of oil, &c. If the bath is too long continued it weakens.

#### EFFECT OF FRICTIONS.

When we consider the qualities and functions of the skin and its relation to the other organs, we can easily understand how important friction is in preserving the health, and in curing disease. The ancients prescribed it with this double intention, and derived therefrom the most happy results. Hahnemann says: "Friction is to single parts what exercise is to the whole of the body; the vital force is roused, and consequently the circulation of the humours is immensely increased and brought into order; the muscles are strengthened, and the skin becomes less sensitive and less liable to be affected by external influences. Effects are produced by friction, which we may vainly try to obtain otherwise. Friction favours perspiration; distributes equally vitality and the elements of nutrition; maintains the balance between the skin and all the organs beneath it; makes supple the muscles and joints; facilitates motion, and gives to the body more vigour and agility. The skin is the most

acted upon, and the different foreign substances that obstruct the excretory ducts of the glands are removed; the sensitive nerves are more or less stimulated; the arterial congestion, as well as the temperature, is increased; the secretion of the glands is promoted; a greater activity is produced in the subjacent textures; the capillary circulation, the elasticity and softness of it, is considerably increased, and its mode of vitality changed.” The frictions are either made with hair gloves, woollen cloths, soft brushes, coarse towels, or with the hands. For curative purposes, besides soap, the most different remedial agents are used as embrocations on such parts as have been exposed to the influence of the vapour.

#### EFFECT OF SHAMPOOING.\* .

Amongst the means used for the preservation and restoration of health, there is none so generally diffused as shampooing, or some of the processes included in this denomination. A great number of people, living under all climates, of different characters and habits, as the Finlanders, Russians, Turks, Egyptians, Indians, Chinese, the South Sea Islanders, and many others, make use of it habitually; but the process varies, and is not everywhere executed with the same care. It consists, in some places, in a kind of kneading of the muscles, in forcible frictions, made alternately on all parts of the body, principally on the limbs and joints, which must be moved by the attendant; in others, it consists in slight manipulations with the tips of the fingers all over the body; and in others, in percussions with the palms of the hands and the soles of the feet, patting and treading on the body, preceded by powerful frictions. In the description of the modern Egyptian bath, by Savary, the kind of shampooing used there is mentioned. To give an idea of the general effects of shampooing, we quote the following from the “Dic-

\* Shampooing is the general term for a number of passive movements done on the bather.

tionnaire des Sciences Médicales :”—“All the authors on this subject agree, and daily experience proves it, that shampooing, administered in the bath, produces a change in the human organism, accompanied by the most agreeable sensations, which it is difficult to describe. The skin having been soaked in the warm water or steam, becomes so supple and flexible, as to give a comfortable feeling, which adds to the charms of life. It seems that one appreciates more completely the enjoyment of life, as if one had not lived before. To the fatigue which we feel succeeds a sensation of lightness, which makes us capable of every kind of bodily exercise ; the natural contractility being restored to the muscles, they act with greater facility and energy ; one fancies that the blood circulates in greater quantity through the vessels, and the physical form undergoes a salutary change ; the functions of the brain, as frequently modified by this, show very soon a considerable increase of activity ; the imagination is excited ; smiling pictures of pleasure show themselves in the most agreeable light, and in the most vivid colours. The European, entirely ignorant, and blindly condemning the customs of other nations, frequently finds in this Asiatic custom a pleasure, which makes him soon adopt it. He sometimes carries their customs to excess, and the women of our countries, when placed under the happy sky of India, do not pass a single day without being shampooed by their attendants, and spend whole hours in this manner.

Shampooing is not like friction, an easy operation that can be performed by everybody ; it requires, on the contrary, much care and dexterity, and cannot be confided to any but prudent and experienced persons. It is capable of a great many modifications, according to the cases in which it is used, the persons who use it, and the part of the body to which it is directed. The mode in which we use it the most frequently is as follows : the patient, after having been exposed for a time to the vapour, is gently

rubbed ; his limbs are slightly pressed, and more or less squeezed with the fingers, from the upper to the lower parts, along the direction of the muscles and tendons, and about the joints, which are moved in all directions by the attendant.

We frequently hear a cracking noise, which is the result of the quick and instantaneous separation of the articulating surfaces habitually in contact, and united to each other by inspissated synovia. The chest and the abdomen are treated similarly ; both sides of the latter are alternately squeezed, in order to produce a slight oscillation and vibration of the viscera (*Rapou*).

#### EFFECT OF THE COLD BATH.

By the cold bath is understood water of a temperature from 65 to 33 degrees of Fahrenheit. The general effects produced in a healthy person by immersion in an ordinary cold bath (that is, water of the temperature of 48 or 50 degrees) are, according to the accurate statement of Dr. Saunders, as follows. First there is a general sensation of cold, producing that sudden shock to the whole system which is one of the most important effects of the cold bath. This is almost immediately succeeded by an equally universal sense of warmth, and this feeling is sooner produced and continues longer in proportion as the person is in full health, and possesses a naturally vigorous circulation. By degrees, however, if the body continue immersed, and beyond the point of safety, it becomes chilled ; violent shivering comes on ; the extremities become numbed and pale ; sometimes sickness takes place ; and at last, the animal powers are exhausted by cold and fatigue. In this process, the most remarkable effects are those which occur first, and are directly consequent to the shock of immersion ; and these require particular attention, in a medical view, as it is only to the production of these that the cold bathing should be suffered to proceed. The sensations of returning warmth, which take place directly after the cold of the first immersion, constitute what has been called the

reaction of the system ; and this is certainly a proper and characteristic term, as it imports an action produced in the body itself to resist an external impression. Reaction in this place, seems to be a peculiar effort of the living power, and to be excited in a degree proportionate to the force of that power, and to the intensity of the cause which called it into action. It implies not merely an increase of the production of animal heat, but, superadded to this, a sudden effort within the body and the whole arterial system to overcome an impression on the extremities so sudden and powerful. Hence it is that a mere attraction of heat by a cold medium will not produce what is precisely meant by reaction, except the external cold be applied suddenly, and to a large surface. These two conditions are fulfilled by sudden immersion in cold water. The greater power of conducting heat which water possesses over air, is also a circumstance that should always be kept in mind in applying cold externally. This is particularly shown where a person continues long in this cold medium beyond the first effects of reaction. On account of the high conducting power of water, the body must be constantly employed in producing an unusual quantity of heat ; and this appears to be a great effort in the constitution, which, if carried too far, goes directly to destroy the animal powers. Thus three effects are produced by immersion in cold water : viz., an instantaneous and powerful shock, a sudden abstraction of heat from the surface of the body, and that exertion of the vital energies to counteract the shock and restore the lost quantity of animal heat which is termed reaction. It is easy to perceive that, when the body is placed under such circumstances for a few seconds, a considerable impression must be made—first upon the sentient system, *i. e.*, the brain and its ramifications, the nerves ; and, secondly, upon the sanguiferous and absorbent systems—and that such impression may be rendered subservient to the prevention and cure of various diseases.

It follows, then, that such applications should be judi-

ously conducted, and the *ne quid nimis* of the Romans be carefully attended to. Hence the necessity of a judicious medical supervision of all such appliances.

DESCRIPTION OF THE RUSSIAN BATH.—(SEE FRONTISPIECE.)

The drawing represents a Russian bath invented by myself, and the mode of applying hot or cold water, or vapour, to the surface of the body for hygienic and curative purposes. *A* is a bath supplied and emptied by the taps *a b c* on the top; the patient is laid upon a cane-work cover, when vapour is to be administered. *d e* are steam pipes connected with a steam generator. On pulling the handle *f*, the steam rushes through the pipe and fills the bath-room with vapour. The pipe *e* is carried into the bath *A*, below the cane work, so as to produce an under current of vapour when the handle *h* is pulled. A similar pipe, *i*, is furnished with a flexible tube, *k*, and socket joint, *l*, for directing the vapour to any required part of the body in local complaints. *m* is a handle connected with the rose jet, *n*, forming a shower bath. The pipe *a* supplies either hot or cold water to the douche and rose jets, *p q*, affixed to the ceiling, by turning the handles *r s t u*. By turning the handle *v*, the water is directed through the jet *w*, or those marked *x y*. *z* is a stool upon which the patient is seated, when the jet *w*, or upward current, is required. The room is constructed of polished slate or marble, and the floor heated by means of double steam pipes shown in the dotted lines *a*. *b* is a basin supplied with water, for sponging the body when requisite. *c* is a bell to ring for the attendant. The aperture *d*, in the cane work, allows the handle *m* to be worked when the cane work is thrown back, and the bath *A* is in use.

The practical advantages of this bath, the application of cold and warm water, and vapour, under all different forms of shower, douche, rain bath, full bath, etc., may be seen at the Institution, 16A, Old Cavendish Street, Cavendish Square.



RULES TO BE OBSERVED DURING THE TREATMENT BY  
THE RUSSIAN BATH.

*a.* Patients accustomed to much wine, beer, or spirits, must abandon the intemperate use of them, because whatever causes determination of blood to the head must be avoided.

*b.* Every kind of fat and salted meats, rich and seasoned soups, raw vegetables, pickles, vinegar, and spices retard the cure.

*c.* Patients should accustom themselves to wash the whole body in the morning as soon as they leave their beds, first with tepid water, and then gradually with cold water ; this must be done very quickly with a sponge, never exceeding from two to five minutes, and should be followed by a friction with rough towels, till the skin becomes warm and red.

*d.* Those able to walk should do so before and after the bath, if the weather is favourable. In many cases exercise after the bath is not only advisable but absolutely necessary. Where perspiration is necessary after the bath, it is better to remain for a while in doors, and then to ride home. In damp and cold weather, exercise in the open air is of no use, and active movements in the house must be substituted for it.

*e.* Violent exercise before as well as after the bath is bad, because the bath does not act beneficially in an exhausted state of the body ; after it has been used, the circulation being very much increased, such exercise might produce congestion in the nobler organs.

*f.* The mind must be tranquil ; the patients must be neither timid nor anxious, as is often the case in the first bath, when they are not accustomed to breathe an air impregnated with vapour ; fatiguing mental labours must be omitted.

*g.* The treatment can be commenced at any time of the year ; the bath should be taken between breakfast and



luncheon, or an hour before dinner, or two to three hours after dinner. It is very bad to enter the bath with a full stomach, but it is not advisable to bathe fasting; the bath should not be taken too late in the evening.

*h.* The temperature of the bath-room should be, at the commencement, from 90 to 100 degrees, and should be increased during the bath to 105, 110, or 115 degrees; in particular cases it can be increased still more without injury; the temperature must be varied also according to the state of the disease and the constitution of the patient.

*i.* The bath must be filled with vapour before the patient enters, because if he is heated only by hot air, it is too dry and often injurious to the head and respiratory organs.

*k.* Persons whose bowels have not been relieved for several days, would find benefit by using before the bath an enema of tepid water, to which may be added, if necessary, a tablespoonful of olive oil or honey.

*l.* As soon as the body perspires profusely, it is rubbed with soap and flannel, hair gloves, brushes; afterwards tepid or cold water is poured over it, and different manipulations are performed, which consist, according to the effects to be produced, in the general or local application of kneading, percussion, rolling, clapping, tapping, pressing, squeezing; these manipulations are repeated according to the feelings of the bather, if he is healthy; and according to the prescription, if a patient. The pouring over of water is also repeated, tepid and cold being sometimes alternated; shower-baths, local vapours, douche, general or local column-douche, ascending douche, and other applications of different degrees of cold or warm water and steam are used, according to the prescription.

*m.* The curative effects of the bath depend principally upon the various combinations of the different means with which we most frequently combine active movements; the more so, as in many cases the patient can move one or another part only in the bath.

The physician has a wide field for his prescription, in the combination, as well as in the alternation and succession, of the elements of which a Russian bath is composed. In the bath is a vessel filled with pure fresh water, in which a sponge or towel is dipped, for the purpose of keeping it before the nose and mouth, if the bather should feel uneasy, which is sometimes the case at the beginning of the treatment, until he is accustomed to inhale freely the air impregnated with vapour. To prevent headaches, to the top of the head and forehead cold compresses are applied, which must be changed as they become warm; these, though keeping the head cool, do not prevent the perspiration of the body; at the same time the local vapour-douche is to be used on the legs, increasing the manipulations on them till the circulation is more equal.

There is no objection to cold water being drunk in small quantities, even during the perspiration itself, which is often increased by drinking; in certain cases it is good to drink one or two tumblers of cold water before you enter the bath-room, a practice recommended by some physicians.

*The duration of the bath* depends upon the disease, the constitution of the body, habit, the degree of temperature, the more or less frequent immersion in cold water or ablutions with it; ordinarily twenty-five to thirty-five minutes are sufficient for curative as well as hygienic effects; too long a stay in the bath, or too high a temperature, may be as injurious as any other remedy when abused.

*After the bath.*—The patient, having been cooled by the cold water and well rubbed, either dresses quietly, or (especially if tepid water only has been used) lies down in another room, enveloped in blankets, till a fresh perspiration appears, which is to be kept up for a quarter to half an hour; afterwards, friction with a sponge, or a towel dipped in cold water, is used to restore the tone of the skin, and to prevent catching cold.

*Repetition of the bath.*—Whether the bath is to be re-

peated, and when, depends upon its effect, the feelings of the patient, and the disease, which must guide the physician in prescribing. Healthy persons should not take more than one bath a-week, which is sufficient to keep up the activity of the skin.

In chronic cases, two or three baths a-week are sufficient ; in very painful disorders, and when the patient has relief only in the bath, or for a couple of hours after it, the bath can be prescribed daily ; and as soon as there is a longer intermission of the pains, the bath is taken on alternate days. In other cases we use the bath on two or three successive days, and omit it the third or fourth day. It is very difficult to give exact rules with regard to the repetition, because the experience of the physician must often be his best guide.

If the local application of the steam-douche is necessary, the part which is to be acted upon particularly must not in the beginning be exposed too much and too near to the steam, but gradually ; the intensity and duration of the application are also increased gradually ; a rule which is to be observed in all the processes of the bath, more especially with regard to very delicate, low-spirited, and weak persons, who, if the necessary caution is observed, not only very soon become accustomed to endure the bath in its different degrees, but also to enjoy it, and feel their spirits raised, their strength increased, and their health improved.

Persons of every age, the young as well as the old, can make use of the Russian bath in every season, for hygienic as well as curative purposes.

#### HINTS FOR THE USE OF THE RUSSIAN BATH.

The Russian bath is used for such diseases as are produced by deranged, diminished, or suppressed activity of the skin, and by the suspended equilibrium between the exhalation and absorption of this organ ; diseases which manifest themselves by a universally or locally increased

or diminished sensibility of the surface of the skin, as well as of the nervous system.

Diseases caused by retarded circulation of the humours in different organs, by stagnation in the blood-vessels and lymphatics, to be cured only by the solution of these *stases*.

In diseases produced by a peculiar dyscrasia (bad mixture) of the humours, as a consequence of a peculiar and specifically acting dyscrasia, to be cured by the excretion and evaporation of the *materia peccans*.

The use of the Russian bath is of the utmost benefit, as a *hygienic means*, for the preservation of health and prevention of disease.

Few that are exposed to the injurious influence of a frequent change of temperature in our climate, or of a sharp east or north-east wind, are able to resist it so that their health should not be more or less deranged; many become seriously ill from this cause. Rheumatic, catarrhal, and inflammatory fevers are ordinarily the disastrous consequences. The Russian vapour-bath will not only cure the slightest indispositions originating from the above-mentioned source, but its prompt and proper use will also prevent more serious maladies.

Dr. Schmidt, a well-known author on the use of the Russian bath, has experienced in his own person this remarkable effect. His health was deranged in consequence of change in the temperature of the atmosphere; his head became dull and heavy; he felt such fatigue in his limbs that he was unable to overcome it, in spite of the greatest effort of will. A few days afterwards he suffered from *violent headache, difficulty of breathing, and oppression of the chest*, while a terrible lassitude came over the whole body; then followed shivering, and an inflammatory fever threatened to appear. Precisely the same sensations preceded violent inflammations of the lungs, from which he had twice previously suffered. He now lost no time, hurried to the Russian bath, with the determination not to leave it

till the most threatening symptoms, the headache and the difficulty of breathing, should have disappeared, which happened after a stay of an hour and a half in the bath-room, the temperature of which was 138 degrees.

Cold water poured in large quantities on the head and body, had in this case an excellent and remarkably decisive effect. Two days had not yet elapsed before the remaining minor symptoms were entirely removed, and health perfectly restored, without the druggist having provided one grain of medicine.

*After violent bodily and mental exertion*, the lassitude, and painful sensations in the limbs connected with it, preventing sleep, so necessary for restoration, are immediately cleared away by the Russian vapour-bath; mind and body are strengthened, and disposed to new labours.

The disagreeable state of the body the day *after too great an indulgence in eating and drinking*, combined with the lessened mental activity, finds a certain and speedy remedy in the Russian vapour-bath.

Above all, in the hygienic applications, this bath is especially to be recommended to persons of *uncommonly irritable constitution*, who are liable to be easily affected by external influences.

The *stiffness of the joints and spine*, so common in advanced age, is considerably lessened by the increase of the circulation, the bracing of the relaxed inactive system, and the improvement in sleep and appetite.

According to the unanimous opinion of authors on this subject, the bath has never a bad effect even upon persons of the most advanced age. It is the best means of cleansing the skin, and contributes to the preservation of health by making the skin less susceptible to the continual atmospheric changes.

*The bath is used as a remedy* in chronic diseases, where, without general bodily suffering, the functions of single organs are deranged, as well as in several acute diseases, if not accompanied by violent general inflammatory fevers.



The particular diseases in which it is particularly efficacious are—

*The simple catarrh*, confined to the nose and frontal cavities, and not accompanied by considerable fever. If its duration is not shortened by the bath, still its further increase and extension to the respiratory organs is prevented, and the body soon freed from the troublesome symptoms, principally the disagreeable heaviness in the limbs, and the want of appetite, which commonly accompany an acute catarrh.

In the *cough* also, a symptom of such catarrh, there is scarcely a remedy which gives relief so readily as this bath. It is remarkably efficacious in *chronic catarrh*, and especially in stoppages of the head, which, having their seat chiefly in the frontal cavities, are very troublesome, and, if of long duration, are followed by very bad consequences. It is remarkable with what rapidity the nasal passages, for years previously impervious to the air, are opened, so that the respiration through these, formerly almost impossible, can be effected with the greatest facility. For this purpose the patient must submit himself to the influence of the vapour for ten or fifteen minutes, and afterwards cold water must be poured quickly over his head and forehead. This operation must be repeated several times in the course of each bath.

In *stoppages of the nose* and suppressed secretion of the mucus from the nose, it is advisable rather to sit upright than to lie in the bath, and to breathe deeply the warm vapour, with the mouth closed.

*Hoarseness* is also cured with the same certainty, if of catarrhal origin, but not if produced by suppuration of the larynx and windpipe. A young man suffering from a great sensibility of these organs, which by any air colder than that of the room produced perfect loss of voice, was so well cured by a few Russian baths, even in the depth of winter, that not the slightest trace of the disorder remained.

The predisposition to returns of the disease, after

inflammation of the throat and tonsils, is considerably lessened.

*Rheumatism.*—The usual method of curing rheumatism is based partly on the patient's remaining during a long time in an equal temperature, by which regimen the sensibility of the skin is necessarily increased towards the change of the atmosphere, and a predisposition to a return of the disease heightened. As repeated returns of rheumatic diseases develop sickly changes in the most important organs, which are often highly dangerous, it is very desirable to possess a means which cures rheumatic diseases in a short time, without danger, and simultaneously prevents the development of a predisposition to a relapse. Slight rheumatic pains, and such as are developed for the first time, for instance, toothache, carache, pains in the neck or shoulders, etc., are frequently cured by the first sweating bath; but in chronic, fixed, or wandering rheumatism, a longer and continued use of the bath becomes necessary; the skin, the activity of which is considerably increased, bears the change of the temperature without injury, and prevents relapse.

It is, indeed, very gratifying to see with what rapidity these baths afford relief in incipient and inveterate rheumatism, as well as in their consequences—stiffness, contraction of the muscles, immobility of the limbs; there is scarcely a remedy to which, in such cases, this bath is not preferable. This bath, in general, acts as an *anodyne*, so that in many cases, if it does not suffice to cure, it still allays the pain for some time. It has quickly removed the rheumatic toothache, and even *face-ache*, the most terrible of painful diseases; also in *cramp* of the stomach, it has acted not only as a sedative, but also as a real curative. The pains after inflammations, particularly in the chest, and after *healed wounds* and *dislocations*, which convert the patient into a living weather-glass, remaining for years, cannot be cured by any other means more cer-



tainly, more speedily, more easily, and more lastingly than by this bath.

*Gout.*—As soon as it is developed, as inflammation and pain in the joints, the Russian bath must be considered as the most sure and speedy remedy. In gout, it is preferable to other means of cure, because it not only removes the disease rapidly and surely, but prevents its quick return, and the development of the most disagreeable and secondary symptoms in the joints, the contractions, swellings, knots, etc. If these symptoms are already present, they will be also removed, but only by a more continued treatment.

*Gouty pains, gouty stiffness of the joints, gouty knots and swellings,* are cured by these baths; but in the first place, the pains are increased or they change their place, both symptoms frequently indicating speedy return of health.

*Face-ache (prosopalgia), ischiatic pains, and pains in the hip* produced by gout, generally as painful as they are obstinate, have been frequently cured by the sweating bath.

*Paralysis* of the upper and lower limbs, produced by rheumatism and gout, has been cured by the baths, combined with frictions and other manipulations along the spine.

*Dropsy of the skin,* produced by derangement of the functions of this organ, which has resisted all other means, has been cured in a very short time by the Russian vapour-bath.

It is a specific in *chronic cutaneous diseases*, principally in the different forms of *ringworm*, and no bad consequences are to be feared in such cases. The efficacy of the baths in these diseases is so great, that any other remedy is seldom required, except where combined with other diseases.

*Old malignant sores* of the legs, even of the worst kind, have been very frequently cured; but more than a dozen or two of baths, it must be understood, were requisite in cases which have obstinately resisted the best and most

efficacious remedies. Innumerable observations have proved that, in *ringworm* and old malignant sores, there is no remedy surer, quicker, or less troublesome than the Russian bath. The more recent the disease, the quicker the cure. Dr. Schmidt himself had the misfortune to suffer from ringworm by contagion, and twelve baths, one taken daily, effected a perfect cure. Also the diseases which follow improperly suppressed ringworm can be sometimes cured by the Russian baths, and under similar circumstances it may be used even in pulmonary and laryngeal phthisis, if these diseases have not yet produced too great a disorganization.

*Diseases of the skin badly treated*, and by their suppression from the skin producing many different and painful diseases, causing consequently the previous and often very dangerous symptoms to disappear. In many of the diseases mentioned the bath contributes essentially to the better action of the remedies indicated, and diminishes the pangs of the sufferers, by shortening considerably the time for their cure.

A very violent inflammation of the eyes, caused by a too sudden suppression of a ringworm on the knee, was cured by the use of the bath alone.

*Crusta lactea* and the more chronic *crusta serpiginosa* of suckling infants are speedily and easily cured. It is advisable that the suckling mother or nurse should likewise take the bath.

*Scrofula*.—In this disease the Russian bath is not less beneficial, nay, it ranks as one of the most efficacious remedies ever applied in scrofula. It diminishes the too great sensibility of the nerves, lessens the morbidly increased irritability of the arteries, but increases the vital activity of the veins and lymphatic vessels. In this way it has the power of solving the strongest and hardest tumours, and curing the most malignant ulcers caused by scrofula. A girl, aged twenty-two years, of a scrofulous habit, suffered from a large hard tumour, which seemed to proceed from

the mesentery. She was treated in vain for two years by very efficacious remedies, but perfectly recovered her health by forty-four Russian vapour-baths, taken in the space of ten months.

*Scrofula*, under the form of eruptions of the skin on the face or on the limbs, is more quickly cured by the repeated application of the bath, combined with suitable internal remedies. Scrofulous swellings of the glands of the throat, neck, and other parts in children, as well as in adults; scrofulous affections of the ear, the nose, and female sexual organs.

*Hysterical spasms*, if produced by scrofulous affections of the female sexual organs, or by over-excitement of the nerves; in the first case the bath assists the solution of the stagnation; in the second, it lessens the morbid sensibility of the nerves.

*Deafness*, in consequence of scrofula, and those swellings in the skin known as *ganglia*, have been frequently cured by the Russian bath, which we mention only in order to show the great power of this treatment in the solution of tumours. In *rickets* it is a very important remedy.

*Varicose veins* are often cured by the more frequent application of the manipulations in the bath.

In *deformities of the spine* and single articulations, the Russian bath is the most important accessory to our treatment by movements; and it is only to avoid increasing the size of this pamphlet that we do not add the history of several cases, as a proof of the good results to be obtained by this combination.

*Pains and swellings*, the consequences of a bruise, fall, or shock, if there is no fracture or dislocation, and if the previous inflammation has been allayed by cold water and arnica, are very soon relieved, because by the restoration of the almost paralysed activity of the lymphatic and blood-vessels, the absorption of the exuded humours is quickened.

Amongst the diseases in which the Russian bath is successfully used we may mention *œdematous swellings* of parts, principally of the hands and feet ; if these parts are very much swollen, they must not be rubbed in the bath, because after it, in the majority of cases, an itching eruption appears, which would become worse by rubbing and scratching, so that the skin, rendered thinner by previous expansion, can be easily injured, and cause chronic ulcers.

In *swellings of the glands*, pressures and percussion act better than the frictions alone.

*Asthma*, if produced by too great a secretion of mucus in the ramifications of the bronchial tubes.

*Asthma*, if produced by abdominal disease, and principally after hemorrhoidal affections and their consequences. Such patients must not be exposed too suddenly to the more dense or too hot vapour ; a moderate temperature and a less prolonged stay in the bath, as well as continual deep breathing, are very useful.

*Retention of urine.*

*Spasms of the bladder.*

*Catarrh of the Bladder.*—Strong frictions and other manipulations on the lower part of the back and on the loins must be alternated with the local douche ; and those affected with this disease should abstain from all cold drinks on the day of the bath.

*Piles and their consequences*, the accompanying pains, discharge of mucus and blood, constipation, headache, etc. etc. Many fear, without cause, that the determination of blood to the head or chest will be increased, but the contrary is the case ; for, in the Russian bath, the blood is driven to the capillaries of the skin, consequently its quantity there is greatly increased, and at the same time considerably derived from the larger vessels of the organs in the head, chest, and abdomen.

During the time such patients lose much blood, they must not take frequent baths.

If the monthly courses are suppressed, or only their

quantity diminished, the bath must be taken *very* warm, and the affusions with cold water used several times.

*Chronic diseases of the liver* (not inflammatory) and spleen, as well as jaundice, are frequently cured.

*Dryness of the skin*, which is removed neither by the heat in summer nor by artificial means.

Diminished or suppressed secretion of mucus in the mouth, nose, and ears.

In deranged assimilation of food, when too large a quantity of fat is deposited, and people become rapidly very stout, a bath may be taken daily for a time.

Want of appetite. Cardialgia. Constipation.

*Abuse of mercury*, mercurial disease and its consequences, as well as its combination with the secondary syphilitic symptoms.

Paralysis of single parts, with stiffness swelling, and tumours of different nature.

Eruptions of the skin, ulcers, pains and swellings of the bones of a *venereal* character.

Consequences of suppressed chronic perspiration of the hands and feet; and of rapidly healed issues, or of such which cease to discharge, and which are cured by the re-appearance of the discharge.

*The Russian bath must not be used* in acute fevers, scarlatina, smallpox, and other acute exanthemata; inflammation of the brain and other violent inflammations; dropsy of the chest, purulent ulcers of the lungs, blood-spitting, blood-vomiting, loss of blood by the kidneys, acute erysipelas of the face, metrorrhagia, carcinoma of the uterus, or in colliquative diseases.

It would be tedious to enter into more particulars at present. This descriptive sketch of the Russian bath, brief and imperfect as it is, will be sufficient to show its importance as an agent for hygienic or for curative purposes. If my endeavours lead to the general introduction of the Russian bath, I shall be much gratified,

because I am sure it is capable, in suitable cases, of the most valuable practical application, for the preservation of health, and for the prevention of many, and the cure of some diseases.

I may add, that during the short time which has elapsed since the Russian bath was added to my Institution, above three hundred persons, and amongst them many medical men, have availed themselves of it, either for curative or hygienic purposes, as seen by the following table :—

NAME OF DISEASE.	NO.	NAME OF DISEASE.	NO.
Asthma .....	6	Paralysis of one arm.....	1
Bronchitis (chronic) .....	7	„ of one leg .....	1
Boils .....	3	„ of both legs .....	1
Colds .....	8	Pains in the leg after fracture ...	1
Contraction of the hip-joint (after fracture of the neck of the thigh) .....	1	Poisoning by dressing a malig- nant ulcer .....	1
Ditto (after rheumatism) .....	1	Piles .....	6
Congestion to the head.....	3	Rheumatism .....	16
Coxalgia.....	2	Spinal weakness.....	4
Catarrh of the bladder .....	2	„ irritation .....	6
Disease of the kidneys .....	3	„ curvature .....	9
Deficient menstruation.....	3	Sprained knee .....	1
Dropsy .....	4	„ ankle .....	1
Enlarged spleen.....	2	Sciatica .....	4
„ testicles .....	2	Skin disease .....	26
„ ovaries .....	2	Secondary syphilis .....	5
Gonorrhœa .....	5	Seminal loss .....	1
Gout .....	12	Scrofula .....	3
Headache (chronic) .....	4	Strangury .....	1
Hypochondriasis .....	4	Spasm of the stomach .....	2
Hoarseness .....	1	Swelling of the parotid gland ...	1
Inflammation of the eyelids (chronic) .....	3	„ „ throat .....	1
Liver complaint .....	6	„ „ inguinal glands ..	1
Lumbago .....	4	„ „ knee .....	1
Necrosis of the tibia.....	1	Uterine complaints .....	4
Neuralgia .....	6	Varicose swelling of the sper- matic cord.....	1
Nervousness .....	6	Varicose veins of the legs .....	2
Obesity .....	3		
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Many of the patients have been under the care of their own medical men, and as I do not interfere in the treatment of such cases, except when requested by my colleagues, I cannot give a more complete list of the diseased treated in my Institution.



